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October 3, 2005

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PO Box 1450
Alexandria, VA 22313-1450

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Art Unit 2685

Attn: Mail Stop Amendment

Re: U.S. Patent Application
Application No. 09/770,675; Filed: January 29, 2001
For: **Wireless and Wired Cable Modem Applications of Universal
Frequency Translation Technology**
Inventor: David SORRELLS
Our Ref: 1744.0140005

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fourth Supplemental Information Disclosure Statement;
2. Form PTO-1449 listing seven (13) documents and accompanied by two (2) documents (IDS Doc. Refs. AM23 and AR59); and
3. One (1) Return Postcard.

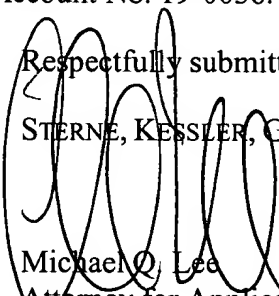
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
October 3, 2005
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.


Michael O. Lee
Attorney for Applicant
Registration No. 35,239

MQL/NDD/srb
Enclosures

449927_1.DOC



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Sorrells *et al.*

Appl. No.: 09/770,675

Filed: January 29, 2001

For: **Wireless and Wired Cable Modem
Applications of Universal
Frequency Translation Technology**

Confirmation No.: 5430

Art Unit: 2685

Examiner: Tran, Pablo N.

Atty. Docket: 1744.0140005

Fourth Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Third Supplemental Information Disclosure Statement filed on July 1, 2005 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Document AM23 was cited in an Office Action in related German Patent Application No. 19983659.0-35, filed October 20, 1999, entitled "Method and System for Frequency Up-Conversion," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,557,641, which as already been cited in the present application.

Document AR59 is an English-language abstract of document AM23.

Document AF67 was cited in an Office Action in related U.S. Patent Application No. 09/796,824, filed March 2, 2001, entitled "Phased Array Antenna Applications of Universal Frequency Translation," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,742,189, which has already been cited in the present application.

Documents AG67-AI67 were cited in an Office Action in related U.S. Patent Application No. 10/318,207, filed December 13, 2002, entitled "Method And Apparatus For Reducing Re-Radiation Using Techniques Of Universal Frequency Translation Technology," directed to related subject matter.

Documents AA68-AD68 were cited in a Notice of Allowance in related U.S. Patent Application No. 09/855,851, filed May 16, 2001, entitled "Apparatus, System, and Method for Down-Converting and Up-Converting Electromagnetic Signals," directed to related subject matter.

Documents AE68-AG68 were cited in an Office Action in related U.S. Patent Application No. 10/315,174, filed December 10, 2002, entitled "Reducing DC Offsets

Using Spectral Spreading," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,999,561 and 6,686,879, which have already been cited in the present application.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below:

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement

was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of ____ in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to

the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

- ☒ 6. A concise explanation of the relevance of the non-English language document AM23 appears below in accordance with 37 C.F.R. § 1.98(a)(3):

Document AM23 (DE 69221098T2) appears to describe a radiofrequency frequency multiplier comprising an automatic level control circuit. An English-language abstract of document AM23 is enclosed as document AR59. It is also noted that document AM23 is a counterpart of European Patent Publication EP 0 548 542 A1, which has already been cited in the present application.

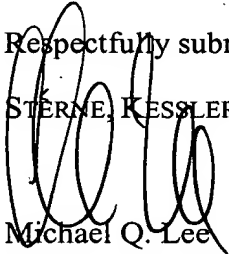
- ☒ 7. Copies of documents AM23 and AR59 are enclosed. However, in accordance with 37 C.F.R. § 1.98(a)(2), copies of the U.S. patents cited on the attached Form PTO-1449 are not enclosed.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☐ 9. It is expected that the examiner will review the prosecution and cited art in the parent application no. _____, in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michael Q. Lee
Attorney for Applicants
Registration No. 35,239

Date:

10/3/05

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449311_1.DOC



FORM PTO-1449

**FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**ATTY. DOCKET NO.
1744.0140005APPLICATION NO.
09/770,675FIRST NAMED INVENTOR
David F. SORRELLSFILING DATE
January 29, 2001ART UNIT
2685**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF67	4,241,451	12/1980	Maixner <i>et al.</i>			
	AG67	5,014,130	05/1991	Heister <i>et al.</i>			
	AH67	5,390,215	02/1995	Anita <i>et al.</i>			
	AI67	5,805,460	09/1998	Greene <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ						Yes No
	AK						Yes No
	AL						Yes No
	AM23	DE 692 21 098 T2	01/1998	DE			No

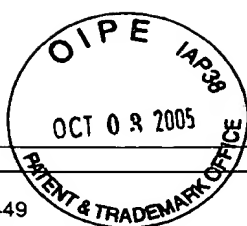
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER INITIAL	DOC. REF.	CITATION
	AN	
	AO	
	AP	
	AQ	
	AR59	English Abstract for German Patent No. DE 692 21 098 T2, 1 page, data supplied from the espacenet.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



FORM PTO-1449

**FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**ATTY. DOCKET NO.
1744.0140005APPLICATION NO.
09/770,675FIRST NAMED INVENTOR
David F. SORRELLSFILING DATE
January 29, 2001ART UNIT
2685**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA68	6,882,194 B2	04/2005	Belot <i>et al.</i>			
	AB68	6,892,062 B2	05/2005	Lee <i>et al.</i>			
	AC68	6,917,796 B2	07/2005	Setty <i>et al.</i>			
	AD68	6,920,311 B2	07/2005	Rofougaran <i>et al.</i>			
	AE68	5,062,122	10/1991	Pham <i>et al.</i>			
	AF68	6,182,011 B1	01/2001	Ward			
	AG68	6,639,939 B1	10/2003	Naden <i>et al.</i>			
	AH68						
	AI68						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOC. REF.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ						Yes No
	AK						Yes No
	AL						Yes No
	AM						Yes No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER INITIAL	DOC. REF.	CITATION
	AN	
	AO	
	AP	
	AQ	
	AR	

EXAMINER

DATE CONSIDERED

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